



Grant Agreement No: 245163
Project start date: June 2010
Project end date: November 2013

ACROPOLIS

Aggregate and Cumulative Risk Of Pesticides: an On-Line
Integrated Strategy
SEVENTH FRAMEWORK PROGRAMME

Deliverable 6.11 Report User Group Industry

The dissemination level changed from Public to Confidential because informal letters or minutes are included in the deliverables, The letters or minutes prove that we have delivered what has been promised but were not announced as being openly available at the time we discussed these issues.

Wageningen University and Research centre, Dienst Landbouwkundig Onderzoek (DLO), Biometris

Contact person: Hilko van der Voet, email: hilko.vandervoet@wur.nl

Project team Acropolis: Waldo de Boer (Biometris), Polly Boon (RIVM), Johannes Kruisselbrink (Biometris), Hilko van der Voet (Biometris), Gerda van Donkersgoed (RIVM), Jacob van Klaveren (RIVM)

User Group members: Clive Boxwell (Syngenta), Monika Bross (BASF), Dave Johnson (Syngenta), Frank Laporte (Bayer), Heike Lohmann (FCS Feinchemie), Tina Mehta (Dow), Mary Panek (BASF-USA), Jeanne Roederer (MA-France), Janet Ruhl (DuPont-USA), Domingo Salazar (Syngenta), Anne Taylor (Syngenta), Regine Thums (DuPont)

1 Introduction

This report describes the proceedings of the Industry User Group in the EU ACROPOLIS project.

The ACROPOLIS User Group Initiative consisted of the following items:

1. Working with three user groups on a confidential basis.
2. The first user group consists of the pesticide industry companies. This group has to calculate the risk according to EU Directives and then has to submit their risk assessment results to the regulatory process. They have been given access to the ACROPOLIS models and consumption or monitoring data owned by the Member States.
3. The second user group consists of the European regulators. The needs of this user group will be discussed with DG SANCO. Regulators have been familiarized with the usefulness and meaning of the results of the probabilistic assessment in comparison with the current deterministic assessment. This experience has also focused on the impact for decision making.
4. The third user group consists of the national food authorities. They have been familiarized to use the EFSA guidance for the calculations of actual risk using monitoring data.
5. All user groups have worked with triazole data as a kind of second case study following the first case study being part of the EFSA opinion. The case study addressed all multi-compound modelling and the input needed for cumulative exposure assessments as a kind of follow up of the first case study. We selected triazoles as a case study to be closely in line with the EFSA Scientific Opinion on Risk Assessment for a Selected Group of Pesticides from the Triazole Group to Test Possible Methodologies to Assess Cumulative Effects from Exposure through Food from these Pesticides on Human Health.
6. Training for EFSA staff (Pesticide Unit and DCM) has been planned. Initially this was planned for April/May 2012 but EFSA has suggested performing the training with a more final version of the ACROPOLIS models.

In October 2012, EFSA published the scientific opinion on the guidance on the use of probabilistic methodology for modelling dietary exposure to pesticide residues of the EFSA Panel on Plant Protection Products and their Residues (PPR) (EFSA, 2012) (referred to in this document as the EFSA guidance on probabilistic modelling). In this guidance, the PPR panel proposes a methodology for performing probabilistic dietary exposure assessment of single or multiple active substances, both acute and chronic, in the context of authorisation, maximum residue limit (MRL) setting, enforcement actions and periodic reviews of monitoring data on actual exposures. In the EFSA guidance on probabilistic modelling, two different model runs are proposed to address different circumstances, namely an optimistic and a pessimistic model run. In the optimistic model run, the major uncertainties are treated using assumptions that are expected to result in lower estimates of exposure, whereas in the pessimistic model runs these uncertainties are treated in such a way that it is expected to result in overestimates of exposure. The outcomes of both model runs are part of a 'basic' assessment, and are used to determine whether further refinement of assessment is useful ('refined' assessment) (EFSA, 2012).

Within the ACROPOLIS project, the MCRA 8 internet tool (<https://mcra8.rivm.nl>) has been developed to assess cumulative exposure to groups of substances belonging to a Cumulative Assessment Group (CAG). A CAG is defined as a group of chemicals with a common adverse health effect, that may or may not act by a common mode of action (EFSA, 2008). The Monte Carlo Risk Assessment (MCRA) software is an internet-based system in which a large part of the requirements as defined in the EFSA guidance on probabilistic modelling are implemented. Within ACROPOLIS, MCRA 7.1 (de Boer et al.

2011) has been extended to allow for the estimation of cumulative dietary exposure. This new version (version 8, MCRA 2013) is being tested in three different user groups (pesticide industry, EU regulators and food authorities), which address real examples of cumulative exposure relevant for their field of work using the ACROPOLIS software tool in relation to the EFSA guidance, for as far as possible and practical achievable. To this end, input data that is already within the platform, as organised as part of ACROPOLIS (e.g. food consumption data, monitoring pesticide residue concentrations), is being used, together with own input data (e.g. processing factors, variability factors, field trial data).

After first contacts the pesticide industry agreed, through its representatives in an ECPA working group, to participate in this User Group. Participants (from seven industries, European and American branches) were first asked to familiarize themselves with the existing MCRA 7.1 program using a case study on captan. Then a training on the use of MCRA 8.0 was given in December 2012 in Wageningen (see Appendix 1, and Chapter 2). A distance learning tool on how to use the MCRA 8.0 model in relation to the EFSA guidance on probabilistic modelling for single compound and cumulative exposure was provided (Deliverable 6.6). Since then, the industry participants have worked in their internal working group to test the functionality of MCRA 8.0 with regards to the EFSA Guidance document. There were regular contacts with the developers of MCRA 8.0 to discuss issues regarding data and program. On 6 May 2013 an interim meeting was held at Amsterdam Schiphol to discuss preliminary results with single compounds. Testing by industry members, also with cumulative assessments and US consumption data in addition to the European data, is continuing and further collaboration to share conclusions and discuss possibilities to enhance the functionality of the program is foreseen after the ending of the ACROPOLIS project. On behalf of the industry members of the User Group Monika Bross (BASF) reported in broad lines during the Second Acropolis Stakeholder meeting in Brussels on 15 October 2013 (Chapter 3 and Appendix 2).

In conclusion, the participation of industry members has greatly contributed to developing the practicality of the ACROPOLIS model software. Industry companies felt that probabilistic modelling is necessary for cumulative risk assessment and that the ACROPOLIS project has brought the relevant IT tools and data accessible to industry. Further development of the tools is necessary.

2 Meeting report ACROPOLIS USER GROUP PESTICIDE INDUSTRY, Wageningen, 6-7 December 2012

Participants industry:

Clive Boxwell (Syngenta), Monika Bross (BASF), Frank Laporte (Bayer), Heike Lohmann (FCS Feinchemie), Tina Mehta (Dow), Mary Panek (BASF-USA), Jeanne Roederer (MA-France), Janet Ruhl (DuPont-USA), Domingo Salazar (Syngenta), Regine Thums (DuPont)
Participating partly by phone: Dave Johnson (Syngenta), Anne Taylor (Syngenta)

Participants research Acropolis project:

Waldo de Boer (WUR/Biometris), Johannes Kruisselbrink (WUR/Biometris), Corinne Sprong (RIVM), Gerie van der Heijden (WUR/Biometris), Hilko van der Voet (WUR/Biometris), Gerda van Donkersgoed (RIVM), Jacob van Klaveren (RIVM)

A **welcome** to Wageningen UR was given by Charon Zondervan (Program Leader of Wageningen UR research program Healthy and Safe Foods from Agricultural Production Chains). Charon explained that Wageningen UR is a combination of a University and a Research Organisation (DLO), with a wide variety of scientific collaborations with academia and industry partners.

He highlighted the current political agenda of the Dutch Government to move towards Public Private Partnership investments and mentioned a few examples of cooperation between Wageningen UR and other industrial companies resulting in excellent science and economical profits. He expressed the hope that the user group initiative of ACROPOLIS could add to this cooperation.

The **ACROPOLIS project** was introduced by Jacob van Klaveren (RIVM, coordinator EU Acropolis). Jacob discussed the reasons for a need to do cumulative exposure assessment, differences between risk assessment and risk management and the aims of the Acropolis project.

He also discussed the User Group Initiatives listed below. He noted that the Midterm review by DG Research has been very positive on the impressive involvement of stakeholders. Member states also outside the project have interest in sharing data and applying the Acropolis integrated model (MCRA 8 currently available as Beta version).

1. Industry. The main purpose of the current meeting (Dec 6-7, 2012) is hands-on training for industry stakeholders and discussion on the way forward.
2. Regulators, who have their meeting in the Standing Committee, which members will discuss the expectations of the ACROPOLIS project in the first week of December. The attention will be on acceptance of probabilistic modelling and the impact of it for decision-making.
3. Food Authorities and EFSA.

All user groups are to be introduced to the Acropolis integrated model, MCRA 8. The software is still a beta version, but will be available for all stakeholders through web-based access together with training and e-learning tools. Data need to be organised further. All stakeholders involved can then share their experience based on the same examples and software in order to fine-tune further needs and developments.

The recent **EFSA guidance** on the use of probabilistic modelling was introduced by Hilko van der Voet (WUR/Biometris, project leader). This Guidance suggests the use of two forms of basic probabilistic assessment, using both an optimistic and a pessimistic approach for assumptions about uncertain issues of modelling. Such issues are for example the way to model concentration data, to handle non-detect measurements, to include unit variability and processing factors, and the use of data on pesticide usage. Special attention was given to the proposed modelling of cumulative exposure as proposed in the EFSA Guidance. All these options have been made available in MCRA 8 as additional output of the Acropolis project.

The triazole **case study for cumulative exposure assessment** was introduced by Jacob. Triazoles were chosen because this is a well-recognized Common Assessment Group, data of a few supervised field trial studies has been published by EFSA and toxicological and residue data for many countries have been organised within the ACROPOLIS project.

As preparation for the user group meeting, all industry participants were given access to MCRA 7.1 before the Dec. 6 meeting, and an e-learning step-by step document was provided to allow the users to enter program selections based on the EFSA **single-compound case study** on captan. Residue and consumption data used in the program were not accessible to the users. Nearly all participants had the opportunity to use the distributed step-by step instructions and gained some understanding of the working of the program and the results.

The **hands-on training** on the triazole data was introduced by Corinne Sprong (RIVM), showing how the output as requested by the EFSA guidance can be generated with MCRA 8. The participants then did two exercises to generate results according to the optimistic and pessimistic EFSA models. In this training a simplified dataset with triazole data was used. The data used by the MCRA 8 program was preloaded on a shared data area on the MCRA website. However, some participants had difficulties to access the data. Participants expressed the need to learn more about the practical data organisation and access to the underlying data used by the program in order to better understand the program functions.

Aspects of the **data organization** were introduced by Gerda van Donkersgoed (RIVM). Emphasis was given to the organization of own data from **field trials** on a focal food that industry users may want to combine with background data which are already available in a shared area on the MCRA website. Industry participants understood that residue concentration data have to be organised as relational tables, giving information on samples, analytical methods, compounds measured per analytical method, analysis of samples, and positive concentrations found, but strongly suggested that some discussion was needed on how typical users could perform this data entry for one or more focal commodities. Without such a means of entering data, the user is limited to previously entered monitoring data. In an exercise the participants then chose two files, one with focal food data and one with background data to use in a single assessment.

Next Corinne showed how **sensitivity analyses** can be performed. Such sensitivity analyses are useful when the basic pessimistic run shows a concern, but the basic optimistic run does not. Sensitivity analyses may then point to specific aspects of the model that can benefit from a more refined modelling. Typical factors to vary in a custom model, starting from either the pessimistic or optimistic model, are the use of processing factors, the use of variability factors, and the imputation of non-detects by either 0 or the limit of reporting. The participants using the ACROPOLIS models exercised sensitivity analyses.

In the final session, Jacob summarised the **current state of the art and developments**. EFSA, DG Sanco and ACROPOLIS have started the discussion on the future needs. MCRA 8.0 will become available to the outside world in May 2013. EFSA is working on the establishment of more Common Assessment Groups, which is planned to be finalized early next year. EFSA hopes to have the cumulative assessment framework completely finalized by May 2013. EFSA supports the ACROPOLIS project by being a member of the Advisory Board.

The final version of the ACROPOLIS model will also include options for aggregate exposure assessment. The aggregated exposure models are built in cooperation with FERA (group of Andy Hart) in close cooperation with the developments of EU funded project BROWSE aiming to improve non-dietary exposure modelling. In addition, the aggregated model might also be connected to results generated with any deterministic approach based on EFSA (draft) guidance on operator exposure.

For future refinement of cumulative and aggregated exposure modelling internal dose modelling might become an option for future refinement of risk assessment. Within the ACROPOLIS project a PB-PK model is built aiming to set an example for these future needs. One of the companies has submitted a report to EPA SAB board including examples of PB-PK modelling.

An open **discussion** on practical needs and the way forward was held addressing the issues below:

Discussion about current workshop on MCRA model

1. Generally, the participants were positive on the opportunity to have this training workshop. Some participants stated to be very pleased with the starting point of learning more about the EFSA guidance. Participants experienced that it was easy to follow the step by-step instructions to run the ACROPOLIS models but difficult to assess the real impact of various choices since the underlying data were not accessible.

Discussion for the path forward with MCRA

2. Some participants had hoped that they would have learnt more about how to connect their own data to the ACROPOLIS models in order that a probabilistic model could be used for risk assessment for stakeholder's compounds and the results compared to results based on deterministic approaches. The need is for some straightforward way for a user to enter toxicological endpoint, residue and processing data.
3. Participants pointed out that a goal of Acropolis was to integrate cumulative and aggregate risk models in a web-based tool, **including accessible data for all stakeholders**
4. Jacob pointed out that more training is needed especially with regard to data organisation. data organisation is something for early next year and it might require further elaboration e.g. coding should be compatible between industry data and EFSA data. There might be a future need for being fully compatible from a computer technology point of view, but this was hardly touched upon.
5. Jacob said that an e-learning tool for the use of MCRA 8 beta version, similar to the e-learning tool MCRA 7.1, will be sent around early next year including instruction on how to organise data for a focal commodity.
6. Jacob said that after the Acropolis project will have finalised the triazole data organisation for all countries involved, a more realistic dataset will be made available to the user group for further practice in the next coming period.
7. The participants felt it was essential to share more ideas about modelling choices, e.g. whether it would be useful to make a distinction between limits of detection and quantification. More practical options in the program may be needed, e.g. different numbers of units in composite samples and combining new data from processing studies with background data on processing.
8. A sort of 'bulletin board' on the MCRA website would be useful to share experiences in relation to the results generated with the triazole data. This will be in terms of comparison the deterministic results and probabilistic outcomes and to discuss both the impact, correctness of the methodology as well as practicalities.

Discussion regarding probabilistic and cumulative assessment

9. The EFSA guidance was easy to follow for a number of issues, but very complicated to follow for some other issues. Some issues might result in unrealistic results, and participants were concerned that risk managers had little guidance on how to consider these results.
10. Industry stakeholders felt that Single-compound probabilistic modelling was already a big challenge with not much understanding of how to deal with the choice of inputs and uncertainties associated with the results. There was concern that EFSA will finalise the completely cumulative exposure modelling mid next year with little discussion with risk managers on the way to assess the results.
11. In the future, a significant number of CAGs are expected.
12. DG-SANCO should be more involved. Jacob pointed out this is part of the plan of the ACROPOLIS user group initiative.

As a follow-up to the discussion the industry user group will evaluate among themselves what would be the best way forward. For the strategic part of this follow-up Monika Bross will be the contact person, also in her capacity of chair of the ECPA working group on these issues.

3 Industry reporting at second Acropolis Stakeholder meeting, Brussels, 15 October 2013

Monika Bross (ECPA/BASF) reported about the experience of the industry user group. Her presentation was made on behalf of seven leading EU and USA pesticide manufacturers. The user group of pesticide industry started to get experience with the ACROPOLIS IT tool from December 2012 onwards. Since then the seven companies have organized meeting on two occasions and had bi-monthly teleconference for exchanging and agreeing on testing procedure using the ACROPOLIS IT tool. Furthermore, the industry user group closely cooperated with the ECPA Expert group on toxicology and the two working groups worked on common view of developing a higher tier dietary exposure assessment procedure for cumulative risk assessment.

The main focus of the user group tests was on acute exposure for single compound (triazole fungicide) using European consumption data and the user group became familiar with the probabilistic tool MCRA software 8 (also referred to as IT tool of ACROPOLIS). They were able to enter their own company specific compound information and compared results generated with deterministic and probabilistic approaches. During the evaluation, the calculation procedures of MCRA and DEEM were directly compared by using US consumption data. The industry user group was very pleased to see how the ACROPOLIS IT tool can be used with the data from two different continents, because it helps to harmonize procedures in pesticide risk assessment. The industry user group studied the impact that the different input parameters such as processing and variability factors had on the results of probabilistic modeling.

Although the pesticide industry companies were able to upload their data to the ACROPOLIS IT tool, a more automated procedure is recommended.

Monika Bross shared the view of pesticide industry companies on the way forward with the audience. Today there is a large volume amount of consumption and monitoring data available in the ACROPOLIS IT tool, but still data from key-countries such as Germany can make the tool even more valuable in the near future. A plea was held to regularly upload all EU monitoring data collected in EU/national programs in order to maintain the usefulness of the IT tool in the nearby future. While the ACROPOLIS IT tool is easy to use, probabilistic assessment itself is, however, still a very complex process. A more straightforward and general accepted 'cook book' complementary to the current EFSA guidance is highly recommended. This 'cook book' should explain calculations steps in easy-understandable language to non-experts. The help offered by the experts of the ACROPOLIS project was always very timely and appreciated by the industry companies. The EFSA on-going work establishing new common assessment groups needs to be reflected in the future ACROPOLIS IT tool.

In conclusion, industry companies felt that probabilistic modeling is necessary for cumulative risk assessment and that the ACROPOLIS project has brought the relevant IT tools and data accessible to industry. Monika Bross recommends discussing the pending issues between DG Sanco and all relevant stakeholders, before deciding to implement probabilistic modeling in a regulatory framework. That discussion should also address intentions to work towards one agreed procedure over Europe and inclusion of realistic assumption related to the input variables. Furthermore, the European Commission should strive for a set of basic criteria for risk managers to decide on the required level of protection. The USA experience herewith, might be helpful to guide Europe through the still open discussion in how to implement probabilistic modeling in future risk management practice in Europe.

References

- de Boer WJ, van der Voet H (2011). MCRA 7. A web-based program for Monte Carlo Risk Assessment. Reference Manual 2011-12-19, documenting MCRA release 7.1. Report, Biometris, Wageningen UR and National Institute for Public Health and the Environment (RIVM). Available online: <https://mcra.rivm.nl>.
- EFSA (2008). Opinion of the Scientific Panel on Plant Protection products and their Residues to evaluate the suitability of existing methodologies and, if appropriate, the identification of new approaches to assess cumulative and synergistic risks from pesticides to human health with a view to set MRLs for those pesticides in the frame of Regulation (EC) 396/2005. The EFSA Journal 704: 1-84. Available online: www.efsa.europa.eu.
- EFSA (2012). Scientific Opinion on the Guidance on the Use of Probabilistic Methodology for Modelling Dietary Exposure to Pesticide Residues. Available online: <http://www.efsa.europa.eu/en/efsajournal/pub/2839.htm>.
- MCRA (2013). MCRA 8.0. a web-based program for Monte Carlo Risk Assessment. Reference Manual, Biometris, Wageningen University and Research centre, Food and Environmental Research Agency (FERA), National Institute for Public Health and the Environment (RIVM). Available online: <https://mcra.rivm8.nl/>.

Appendix 1. Program User Group meeting December 2012

PROGRAMME: USER GROUP PESTICIDE INDUSTRY.

6-7 December 2012

Wageningen UR, Forum (Building 102), Droevendaalsesteeg 2, 6708 PB

Wageningen

Rooms PC 612 (Thursday), PC 713 (Friday)

Light lunch from 12.30

Day 1: start 13.00

- Welcome to Wageningen UR (Dr. Charon Zondervan)
- ACROPOLIS User Group Initiative (Jacob van Klaveren)
 - DG Research request and midterm review
 - Stakeholder conference
 - Other user groups such as regulators and food authorities
 - Potential connection to EFSA and DG Sanco
 - User group conditions (confidentiality and beta version of MCRA 8)
- EFSA guidance on the use of probabilistic modeling (Hilko van der Voet)
 - Basic assessment (at this stage we will limit ourselves to basic assessment)
 - Required input and output tables
 - Data and modeling issues for consumption, concentration, processing, variability factor.
- Discussion on to the EFSA case study captan (all)
 - Experience with the distant learning tool and MCRA 7.1 which has been sent around
 - Pro's and con's of the case study
 - Level of understanding
- Introduction to the new case study (Jacob van Klaveren)
 - Case study multiple chemicals (triazoles)
 - EFSA opinion on triazoles
 - What has been organized in the ACROPOLIS project
 - Relevant input data processing, field trial data, processing information as already published in EFSA Opinions and/or DARs.
- MCRA 8 hands-on training (Corinne Sprong)
 - Overview of the structure of MCRA 8 beta version
 - Distant E-learning tool MCRA 8 beta version
 - Examples of data organization, selections of models
 - Uncertainty analyses
 - Output tables and diagnostic tools to overview completeness of data
 - Exercises (all)

Dinner

Day 2

- Data organization and focal commodities (Gerda van Donkersgoed)
 - Data needed for focal commodities
 - Percentage crop treated
 - Data organized for background commodities
 - Completeness check of data needed for the assessment
 - Where to find more information relevant for the input parameters
 - Exercises with focal commodity (all)

- Continue hands-on training with a focus on sensitivity analyses (Corinne Sprong)
 - Processing
 - Variability factor
 - Empirical versus parametric modeling
 - Assumptions Limit of Reporting
 - Exercises sensitivity analyses (all)

- Other developments (issues are partly initiated in the ACROPOLIS project but more as starting points for future developments or challenges)
 - Common Assessment Group testing
 - Relative Potency Factors (RPF) and BenchMark Dose modeling
 - Aggregated exposure modeling
 - Internal dose modeling
 - Potential refinements and future perspectives

- Open discussion on practical needs and the way forward (all)
 - Future data organization needs related to focal commodities
 - Confidentiality issues
 - Discussion on output (e.g. contributions of food items and pesticides to total exposure)
 - Future risk mitigation issues
 - Relationship with other user groups and how to share experiences
 - Future developments outside ACROPOLIS

End 12.30

Lunch

Appendix 2. Presentation Monika Bross Second Stakeholder Meeting




Acropolis project – Experience of the industry user group and path forward

Monika Bross, 2nd Acropolis Stakeholder meeting
Brussels, October 15, 2013



Acropolis project – Experience of the industry user group and path forward

- Introduction
- Experience and path forward
- Challenges and conclusions




Acropolis Project, October 2013



Introduction

- Industry user group – set-up and members
 - First contact with MCRA in January 2012
 - Set-up of industry user group in December 2012: MCRA training in Wageningen (NL)
 - Members from seven companies located in Europe and the USA
 - Members have different areas / levels of expertise
 - BI – monthly teleconferences for exchange and agreement on next testing procedures
- Close link to Tox Expert Group of ECPA

➔ Goal: Support of the development of a higher tier dietary exposure assessment tool (also suitable for cumulative assessment)

Acropolis Project, October 2013




Introduction

- Industry user group – main focus of tests
 - Acute exposure – single compounds (triazole fungicide)
 - Get familiar with a probabilistic tool (MCRA software 8)
 - Use of food consumption data from different EU countries (plus US WWEIA)
 - Use of residue data from EU monitoring programs
 - Selection of statistical parameter and evaluation of uncertainties
 - Upload of supervised field trial data into MCRA via an Access DB tool
 - Compare outcome with deterministic (Dutch NESTI) and probabilistic (US DEEM) tools
 - Investigate impact of key parameters (variability, LOQ, processing factors) on the outcome of the assessment

➔ Continuation of tests: More focus on cumulative and chronic assessments

Acropolis Project, October 2013



Experiences and path forward

Input data: Food consumption data

- Status "Today" in MCRA version 8
 - Data from several countries are available in MCRA
 - Data collected by different methods are resulting in big differences with regards to quality
 - Data from key countries (e.g. Germany) still missing (ownership discussion)
- Path forward:
 - Fully harmonized food consumption data available to all stakeholders

➔ Proposed next step: Data cleaning: "Wrong" consumption / recipe data have severe impact on high percentile exposure, upload of additional data

Acropolis Project, October 2013



Experiences and path forward

Input data: Food monitoring data / residue data

- Status "Today" in MCRA version 8
 - Access DB tool available for supervised trial data
 - Residue data from supervised field trials can be combined with monitoring data
 - Selected monitoring data from some countries available in MCRA
- Path forward:
 - Regular upload of all European monitoring data collected in the EU / national program

➔ Proposed next step: Data cleaning, improvement of the Access data base tool (% CT)

Acropolis Project, October 2013

Experiences and path forward



"TooP":

- Status "Today" in MCRA version 8
 - Single platform with access to consumption / monitoring data
 - Easy to use
 - Sufficiently supported by RIVM and RIKILT
 - **BUT:** Still blackbox (calculation steps not understood)
- Path forward:
 - Transparency considerably improved (including calculation methodologies)
 - Further development increased / maintenance of MCRA ensured
 - User support also guaranteed in future

Proposed next step: Preparation of a "detailed cook book" (updated manual) explaining calculation steps to "non-expert" users

Acropolis Project, October 2013

Experiences and path forward



Regulatory prerequisites – Cumulative exposure assessment

- Status "Today"
 - Guidance document published for acute / chronic exposure assessment based on field trial / monitoring data
 - Includes description of methods for uncertainty / variability
 - **BUT:** Assessments with two different scenarios are extremely complex
- Path forward:
 - Proposal on calibration of tool available (US TDB study)
 - One "realistic" scenario including defined refinement options
 - Guidance or basic acceptance criteria for risk managers on level of protection given (starting point?: make use of US EPA experience)

Any change in the regulatory requirements will have an impact on MCRA

Acropolis Project, October 2013

Experiences and path forward



Regulatory prerequisites – Cumulative assessment groups

- Status "Today"
 - Scientific opinion on methodology and first CAGs (neurotox, thyroid effects) published
 - Methodology based on phenomenological effects (system or organ toxicity) resulting in
 - Huge assessment groups (up to 98 members)
 - Overlapping groups
- Path forward:
 - Exposure and potency considered in definition of CAGs
 - Options for refinement of CAGs provided
 - Methodology internationally aligned and suitable for MRL setting

EFSA's ongoing work needs to be reflected (also in future) in MCRA

Acropolis Project, October 2013

Challenges and conclusions



- Probabilistic methodologies are needed for conducting cumulative dietary exposure assessments
- Huge progress has been made within the Acropolis project, however there is still a lot of work in front of us (all stakeholders)
- Identified issues / open points must be solved prior to any regulatory use (exposure and hazard assessment)

Many goals achieved, but: Clear idea needed how to proceed in future

Acropolis Project, October 2013

Acropolis project – Experience of the industry user group and path forward



Acknowledgements:

- ECPA ad-hoc group dietary risk assessment:
 - Bayer
 - BASF
 - DuPont
 - DOW
 - Makheshim Agan, Feinchemie Schwebbs
 - Monsanto
 - Syngenta



Thank you for your attention!

Acropolis Project, October 2013